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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,170	10/21/2005	Masayuki Kashimura	4007561-173525	1972

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EXAMINER	
KRUER, KEVIN R	
ART UNIT	**PAPER NUMBER**
1787	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/554,170	KASHIMURA ET AL.	
	Examiner	Art Unit	
	KEVIN R. KRUER	1787	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 October 2009*.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5,7-15 and 17-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5,7-15 and 17-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 5, 7-15, and 17-22 (all claims) are rejected under 35 U.S.C. 103(a) as being unpatentable over WO99/52973 (herein referred to as Ohba) in view of Fong (US 4,786,561) NOTE: US 6,605,344 is herein relied upon as an English translation of the WO document.

Ohba teaches a gas barrier film which is produced by applying a metallic compound to the surface of a poly(meth)acrylic polymer layer (abstract). The metallic compound may be utilized alone or compounded with a resin (col 3, lines 50+). The metallic compound may comprise an alkaline earth metal or transition metal having an oxidation number of +2 (col 7, lines 22-25). The thickness of the poly(meth)acrylic layer is 0.1-50um (col 6, lines 59+). The metallic compound is applied in amounts of 0.03-20g/sqare meter (col 8, lines 21+). A polymer layer may be applied to the metallic compound layer (col 10, lines 26+) and a heat sealable layer may be applied to said outer polymer layer (col 10, lines 43+). Herein, the polymer layer is herein understood to read on the claimed base film and the heat sealable layer is understood to read on the claimed heat sensitive tackifier of claim 18 and the additional layer of claim 9. The film is used to package materials (col 10, lines 63+-herein understood to read on the

claimed label and packaging embodiments of claims 17-20) and meets the claimed barrier properties (see Table 1).

Ohba does not teach the substrate film should be heat shrinkable. However, Fong teaches barrier coatings may be applied to oriented polyolefin substrates in order to obtain heat shrinkable films useful as overwraps (col 2, lines 51+) and labels (col 1, lines 15+). Said films are made heat shrinkable by orienting the polyolefin substrate film and then applying a coating of the barrier coating. Shrink is directly proportional to the degree of orientation of the base layer. Thus, it would have been obvious to one having ordinary skill in the art to orient the film in order to obtain and make it heat shrinkable because heat shrinkability is desired in the barrier packaging art. Furthermore, it would have been obvious to control the degree of orientation in order to obtain the desired level of heat shrinkage.

With regards to the limitation that the coating is free of polyalcohol, Ohba teaches the polyalcohol is present in amounts of 1% or greater (col 5, lines 50+). However, it would have been obvious to eliminate the polyalcohol because the functions attributed thereto are not required in the barrier coating. Furthermore, the courts have held a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. Thus, it would have been obvious to utilize a coating with 0% polyalcohol because the skilled artisan would expect a composition free of polyalcohol to have the same properties as the disclosed composition having 1% polyalcohol.

With regards to the claimed oxygen permeability of claim 1, Ohba teaches the permeability is preferably less than 400cm^3/(m2*day*MPa) (col 9, line 40). Furthermore, Ohba teaches the permeability can be controlled by selecting the degree of neutralization (col 4, lines 60+) and the thickness of the coatings (col 7, lines 57+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the degree of neutralization and the film thickness in order to optimize the oxygen permeability of the film.

With regard to the limitation that the base film exhibits "a percent thermal shrinkage in at least one direction of 5-90% as measured by immersing the base film in hot water at 90°C for 30 seconds," the examiner takes the position that the polyolefin film of Fong will inherently meet said limitation. Specifically, Fong teaches the film will understood at least a 10% shrink when heat to about 100°C (claim 1). Alternatively, Fong teaches the temperature at which a film will shrink is related to its melting point (col 3, lines 12+). Thus, it would have been obvious to the skilled artisan at the time the invention was made to select a base polymer with a melting point which will allow for shrinkage at any desired temperature.

With regards to claim 5, Ohba teaches the claimed relative thicknesses (claim 5). With regards to claim 11, said property is understood to be inherent to the film taught in Ohba. Said conclusion is supported by the data in Table 1 of Fong.

Response to Arguments

Applicant's arguments with respect to the pending claims have been fully considered but are moot in view of the new grounds of rejection. In order to expedite

prosecution of the application, the examiner will take this opportunity to respond to some of applicant's arguments which may be relevant to the new grounds of rejection.

Applicant argues that Ohba explicitly teaches the polyalcohol must be present. Said argument is noted but is not persuasive because the courts have held a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties.

While applicant argues there is no explicit teaching in Ohba that teaches said component may be excluded, said argument is not persuasive because there is no teaching in the prior art that suggests polyalcohol is critical to the disclosed invention. To the contrary, the skilled artisan would expect the film to have virtually the same properties. Applicant argues that sufficient oxygen barrier properties would be obtainable without polyalcohol. Said argument is not persuasive for the reasons noted above. Specifically, Ohba teaches the coating may have has little as 1% polyalcohol and the skilled artisan would not expect the exclusion of said polyalcohol to drastically alter the film's properties. To the contrary, polycarboxylic acid is known to have excellent barrier properties but is humidity sensitive. The polyalcohol is added to improve the polycarboxylic acid's resistance to humidity by providing crosslinks. However, the adjacent metal layer also provides crosslinking and a polymeric overlay provides sufficient barrier properties to humidity. Therefore, the skilled artisan would not expect the absence of the polyalcohol to affect oxygen barrier properties of the multi-layer film to be affected by the absence of the polyalcohol. Thus, Tanaka teaches

the polyalcohol creates ester bonds which improved hot water resistance, but said properties can also be assured by providing a polymeric overlay on the polycarboxylic acid barrier films. The examiner notes all the inventive examples comprise a polymer layer on top of the polycarboxylic acid layer, which will provide an effective moisture barrier to prevent deterioration of the polycarboxylic acid barrier properties at high humidity.

For the reasons noted above, the claims are not allowable over the prior art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN R. KRUER whose telephone number is (571)272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin R Kruer/
Primary Examiner, Art Unit 1787